Recommender systems (RS) are succeeding in extensive acceptance in e-commerce applications to face the data overload problem. The system compares ranging from the user profile to item characteristics, geographic territory, social impact, past behaviors to present information of items that are likely of interest to the user. Generally, research shows that a discreetly devised model using specific interaction produces highly accurate recommendations on a particular dataset. The real business circumstance is more complicated, where diverse combinations of interactions play a vital role and favored in different proportions by a specific user. In this paper, we endeavor to generate a competent framework merging various heterogeneous item relationships by concurrently modeling based on two important questions. The first one is, at a specific point in time, what source of recommendation is a user likely to be responsive. And the other one is the optimal recommendation from an individual source. Our method adopts ideas from knowledge graph representations as well as several expert networks where each of them specializes in a different part of input space. We see that our approach produces more specific recommendations than other options and also presenting instinctive
explanations behind the recommendations.

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**Index Terms**

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